Third West Weekly Report
Shepherd, Michael
to:
Joyce Ackerman, 'Craig Barnitz (cbamitz@utah.gov)'
10/19/2011 10:25 AM
Hide Details
From: "Shepherd, Michael" <Michael.Shepherd@PacifiCorp.com>

To: Joyce Ackerman/R8/USEPA/US@EPA, "'Craig Bamitz (cbamitz@utah.gov)'" <cbamitz@utah.gov>

7 Attachments

Weekly Reports 10-10 to 10-14.pdf Third West Weekly Log 2011-41.pdf 222621-1.pdf 222298-1.pdf 222360-1.pdf
222518-1.pdf 222520-1.pdf

Joyce & Craig,

Attached are the reports for the week of October 10, 2011.

All air monitoring results came back negative.

One question for you, we have been monitoring at four points around the exclusion zone plus two more points around the non-exclusion zone perimeter, six total each day. We also have been monitoring on the weekends for a few weeks now. Thus far we have only seen three isolated chrysotile hits. We discussed at the conception of this project that once we establish a base of air monitor results that are favorable that we could reduce the number of air monitors to four points around the site perimeter and stop monitoring on the weekends. I would like to start this approach this week. Please let me know if you not okay with this change or if you have any other concerns.

Sincerely,

Mike Shepherd
Project Manager
Rocky Mountain Power - Major Projects
801.220.4584 Office
801.631.1310 Cell
801.220.2797 Fax
michael.shepherd@pacificorp.com

REI LAB Reservoirs Environmental, Inc.

October 17, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 222520-1
Project # / P.O. #	None Given
Project Description:	Rocky Mtn. Power 3rd West Sub Station

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 222520-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:	RES 222520-1
Client:	R & R Environmental
Client Project Number / P.O.:	None Given
Client Project Description:	Rocky Mtn. Power 3rd West Sub Station
Date Samples Received:	October 14, 2011
Analysis Type:	TEM, AHERA
Turnaround:	24 Hour
Date Samples Analyzed:	October 14, 2011

Client ID Number	Lab ID Number		Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-101211-E	EM	810494	0.1100	1050	ND	0.0033	BAS	BAS
3W-101211-S	EM	810495	0.1100	1062	ND	0.0033	BAS	BAS
3W-101211-N	EM	810496	0.1100	1042	ND	0.0034	BAS	BAS
3W-101211-W	EM	810497	0.1100	1054	ND	0.0033	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Vattraino
Date: 2011.10.17 09:23:34 -06'00'

DATA QA

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/10/11

Location: 3rd West, 1st South, SLC

Job Number:

Survey Conducted By: Justin Kargis

Title:

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.451 (a) (4)	Scaffolding shall have guardrails and toeboards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.			x	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.			x	
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.			x	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

No exclusion zone work today.

Newman brings in loads of fill material throughout the day.

CVE working on re-bar framework for concrete forms.

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R & R ENVIRONMENTAL, INC.
ASBESTOS · LEAD · INDUSTRIAL HYGIENE

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/10/11

General

☑	Work area Health and Safety Inspection
NA	Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
NA	Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
NA	Site hazard and safety instruction for all first time employees, contractors or visitors
NA	Complete Employee Meeting Record Form B (where applicable
NA	Document required Respirator Training completion with Form H
☑	Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.
NA	Confirm return of waste material manifest documents for each load with site manager.
NA	Complete all CSHASP Forms (for applicable activities planned for that day)
NA	Illness/Injury Report Form A
NA	Site-Specific Training Record Form C
NA	Hot Work Permit Form D
NA	Trench/Evacuation Permit Form E
NA	Combined Space Entry Permit From F
☑	Exclusion zone operations are practiced as instructed.
☑	Decontamination unit is working properly.
☑	Workers are using decontamination unit as instructed.
☑	Workers use personal protective equipment properly.
☑	Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.
☑	Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.
☑	Review sign-in/sign-out log throughout and at the end of the workday.
☑	Secure the site at the end of the workday

Sampling

NA	Soil Confirmation sampling for any newly excavated areas
☑	Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
NA	Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
NA	Digitally photograph each sample location and at any place field sampling personnel determined necessary
NA	Electronically file photo files into the on-site database

☑	Complete Field Documentation
☑	Field Sample Data Sheets (FSDS)
☑	Logbook
NA	On-site computer database
☑	Label each sample media with a unique number
☑	Seal sample(s) in zip lock plastic bags
☑	Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
☑	Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
☑	Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
☑	Electronically file sample reports into on-site database

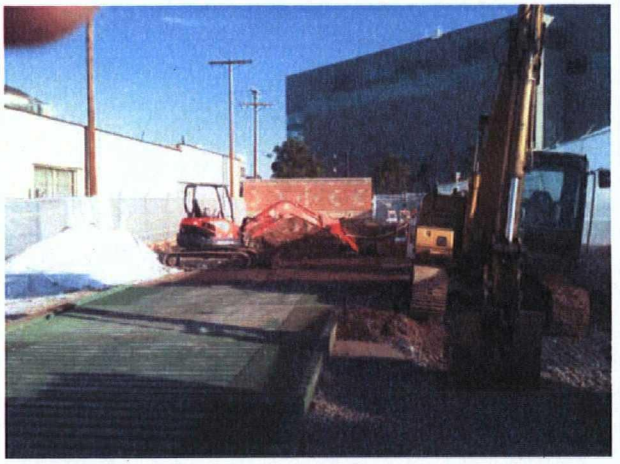

PHOTO 1

PHOTO 2

PHOTO 3

R & R Environmental, Inc.
47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:		
DESIGNED BY:	SCALE:	REVIEWED BY: DCR
DRAWN BY: JMK	DATE: 10/10/2011	FILE:

SITE PHOTOGRAPHS

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/11/11

Location: 3rd West, 1st South, SLC

Job Number:

Survey Conducted By: Justin Kargis

Title:

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
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1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.			x	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.			x	
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.			x	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
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1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Newman uses poly to encapsulate the west and north banks of excavation in EZ. Covered other contaminated surfaces with 8-12 inches of imported clean fill.

Exclusion zone lifted approximately 11:00

Newman begins to back fill zone 1 excavation to bring up to grade. Continue to deliver clean fill material.

CVE continues to place building materials and construct framework for concrete.

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R & R ENVIRONMENTAL, INC.
ASBESTOS • LEAD • INDUSTRIAL HYGIENE

3RII WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/11/11

General

☑ Work area Health and Safety Inspection

NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day

NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP

NA Site hazard and safety instruction for all first time employees, contractors or visitors

NA Complete Employee Meeting Record Form B (where applicable

NA Document required Respirator Training completion with Form H

☑ Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.

NA Confirm return of waste material manifest documents for each load with site manager.

NA Complete all CSHASP Forms (for applicable activities planned for that day)

- NA Illness/Injury Report Form A
- NA Site-Specific Training Record Form C
- NA Hot Work Permit Form D
- NA Trench/Evacuation Permit Form E
- NA Combined Space Entry Permit From F

☑ Exclusion zone operations are practiced as instructed.

- ☑ Decontamination unit is working properly.
- ☑ Workers are using decontamination unit as instructed.
- ☑ Workers use personal protective equipment properly.

☑ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.

☑ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.

☑ Review sign-in/sign-out log throughout and at the end of the workday.

☑ Secure the site at the end of the workday

Sampling

NA Soil Confirmation sampling for any newly excavated areas

☑ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone

NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal

NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

NA Electronically file photo files into the on-site database

☑	Complete Field Documentation
☑	Field Sample Data Sheets (FSDS)
☑	Logbook
NA	On-site computer database
☑	Label each sample media with a unique number
☑	Seal sample(s) in zip lock plastic bags
☑	Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
☑	Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
NA	Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
NA	Electronically file sample reports into on-site database

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/12/11

Location: 3rd West, 1st South, SLC

Job Number:

Survey Conducted By: Justin Kargis

Title:

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
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1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
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1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
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1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.			x	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.			x	
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.			x	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

9:00 bi-weekly team meeting:

- discussed exclusion zone breaches, how support zone can help workers in EZ with compliance measures such as gate control, visibility from outside on 1st south.

!2:00 – Met with Scott Collard to check zone 1 and discuss encapsulation and soil retention.

Newman continued with backfill in zone 1.

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

R & R ENVIRONMENTAL, INC.
ASBESTOS • LEAD • INDUSTRIAL HYGIENE

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/12/11

General

☑ Work area Health and Safety Inspection

NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day

NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP

NA Site hazard and safety instruction for all first time employees, contractors or visitors

NA Complete Employee Meeting Record Form B (where applicable

NA Document required Respirator Training completion with Form H

NA Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.

NA Confirm retum of waste material manifest documents for each load with site manager.

NA Complete all CSHASP Forms (for applicable activities plamed for that day)

- NA Illness/Injury Report Form A
- NA Site-Specific Training Record Form C
- NA Hot Work Permit Form D
- NA Trench/Evacuation Permit Form E
- NA Combined Space Entry Permit From F

☑ Exclusion zone operations are practiced as instructed.

- ☑ Decontamination unit is working properly.
- ☑ Workers are using decontamination unit as instructed.
- ☑ Workers use personal protective equipment properly.

☑ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.

☑ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.

☑ Review sign-in/sign-out log throughout and at the end of the workday.

☑ Secure the site at the end of the workday

Sampling

NA Soil Confirmation sampling for any newly excavated areas

☑ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone

NA Personal Breathing Zone Monitoring on persomel conducting contaminated dust and soil removal

NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

NA		Electronically file photo files into the on-site database
☑		Complete Field Documentation
	☑	Field Sample Data Sheets (FSDS)
	☑	Logbook
	NA	On-site computer database
☑		Label each sample media with a unique number
☑		Seal sample(s) in zip lock plastic bags
☑		Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
☑		Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
NA		Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
NA		Electronically file sample reports into on-site database

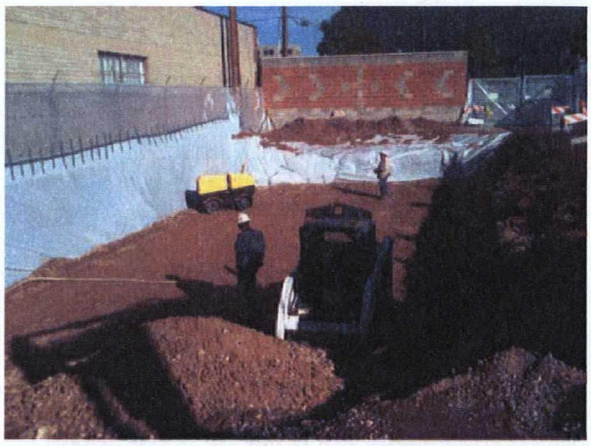

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

R & R Environmental, Inc.
47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:		
DESIGNED BY:	SCALE:	REVIEWED BY: DCR
DRAWN BY: JMK	DATE: 10/12/2011	FILE:

SITE PHOTOGRAPHS

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station _____ Date: 10/13/11 _____

Location: 3rd West, 1st South, SLC _____ Job Number: _____

Survey Conducted By: Justin Kargis _____ Title: _____

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
1926.451 (a) (4)	Scaffolding shall have guardrails and toeboards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

Standard	*Title*	In Compliance ☐	Out of Compliance ☐	N/A ☐	*Corrective Action Taken and Date*
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Newman worked until 7:30 on elevating and compacting material in zone 1. Only north half passed compaction testing.

CVE continued with building forms and placing building materials.

No active exclusion zone.

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

R & R ENVIRONMENTAL, INC.
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3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: **10/13/11**

General

☑ Work area Health and Safety Inspection

NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day

NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP

NA Site hazard and safety instruction for all first time employees, contractors or visitors

NA Complete Employee Meeting Record Form B (where applicable

NA Document required Respirator Training completion with Form H

NA Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.

☑ Confirm return of waste material manifest documents for each load with site manager.

NA Complete all CSHASP Forms (for applicable acfivities planned for that day)

- NA Illness/Injury Report Form A
- NA Site-Specific Training Record Form C
- NA Hot Work Permit Form D
- NA Trench/Evacuation Permit Form E
- NA Combined Space Entry Permit From F
- NA Exclusion zone operations are practiced as instructed.
  - NA Decontamination unit is working properly.
  - NA Workers are using decontamination unit as instructed.
  - NA Workers use personal protective equipment properly.

☑ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.

☑ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.

☑ Review sign-in/sign-out log throughout and at the end of the workday.

☑ Secure the site at the end of the workday

Sampling

NA Soil Confirmation sampling for any newly excavated areas

☑ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone

NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal

NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

NA Electronically file photo files into the on-site database

☑ Complete Field Documentation
- ☑ Field Sample Data Sheets (FSDS)
- ☑ Logbook
- NA On-site computer database

☑ Label each sample media with a unique number

☑ Seal sample(s) in zip lock plastic bags

☑ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory

☑ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples

NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees

NA Electronically file sample reports into on-site database

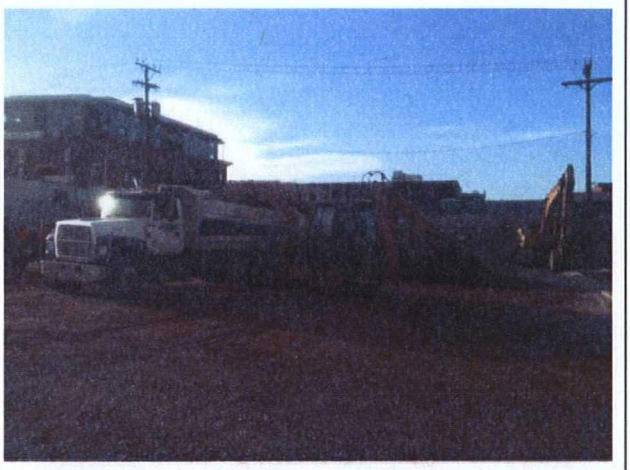

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

R & R Environmental, Inc.
47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:	SCALE:	REVIEWED BY: DCR
DRAWN BY: JMK	DATE: 10/13/2011	FILE:

SITE PHOTOGRAPHS

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/14/11

Location: 3rd West, 1st South, SLC

Job Number:

Survey Conducted By: Justin Kargis

Title:

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance ☐	Out of Compliance ☐	N/A ☐	Corrective Action Taken and Date
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1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
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1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
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1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Newman excavated in N.E. and S. E. corners to determine if depths for building footings will cut into contaminated soil. Did not see native soil at depths when they stopped.

CVE worked throughout the day on forms and were able to pour footer for transformer building in zone 1 around 6:30 pm.

PACIFICORP
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3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/14/11

General

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Sampling

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PHOTO 1

PHOTO 2

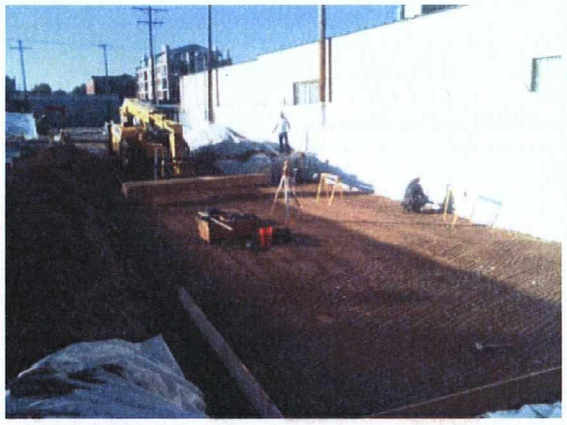


PHOTO 3

PHOTO 4

R & R Environmental, Inc.
47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:	SCALE:	REVIEWED BY:
		DCR
DRAWN BY:	DATE:	FILE:
JMK	10/14/2011	

SITE PHOTOGRAPHS

PACIFICORP
A MIDAMERICAN ENERGY HOLDINGS COMPANY

3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Sunday, October 9, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	8:00	**Crew Stop Time:**	12:00	**Tot Hrs mns:**	4:00
FCR Start Time:	8:00	**FCR Stop Time:**	12:00	**Tot Hrs mns:**	4:00

Use *military time format 00:00*

WEATHER CONDITIONS: Partly Cloudy, Sunny - 60 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. Set up the monitors at 8:00. Returned at 5:00 PM to remove the monitors. Total hours worked is 4 hours.
Contractors: R&R = 1

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Joe Bryant 0850
Dispatcher logout, name and time:	Joe Bryant 1705

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Pickup, portable toilet, forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Monday, October 10, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	7:00	**Crew Stop Time:**	17:10	**Tot Hrs mns:**	10:10
FCR Start Time:	6:45	**FCR Stop Time:**	17:15	**Tot Hrs mns:**	10:30

Use military time format 00:00

WEATHER CONDITIONS: Partly Cloudy, Sunny -

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. Two of Newman's crew are off today so LeRoy is opening up the spoils pile to see if it will dry out some. Newman continued hauling in ABC material for use in the backfilling of the control building foundation. CVE civil crew mobed to the site and started shaking out and tying rebar. Brian King and Robert Hamilton, RMP Environmental Analysts, dropped by for a visit around 10:00. Contractors: CVE = 5 , Newman = 2 , R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Gus Montanez 0650
Dispatcher logout, name and time:	Manny LuHaun 1720

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck.

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Tuesday, Octcober 11, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	7:00	**Crew Stop Time:**	17:15	**Tot Hrs mns:**	10:15
FCR Start Time:	6:50	**FCR Stop Time:**	17:20	**Tot Hrs mns:**	10:30

Use *military time format 00:00*

WEATHER CONDITIONS: Cloudy / Rainy / Partly Cloudy - 60 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. Newman continues to import ABC material for backfill. Newman is working in the exclusion zone lining the west and north slopes with visqueen and placing material on the south and east slopes prior to starting the backfill which will encapsulate the native material, allowing us to work in the area without wearing asbestos PPE. Completed the placement of visqueen and the base layer of ABC material at 11:00 and declared the area around the control building excavation to no longer be an exclusion zone. R&R concurred. Newman removed the portable truck wash structure from the area to allow better access into the site for the placement of the balance of the backfill material. Placed ABC material in the bottom of the hole. Not able to achieve 95% compaction before quitting time. Will try again tomorrow. CVE is tying rebar for the spread footer mats. Contractors: CVE = 4 , Newman = 4 , R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Gus Montanez 0650
Dispatcher logout, name and time:	Barry Nielson 1715

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Wednesday, October 12, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	7:00	**Crew Stop Time:**	17:15	**Tot Hrs mns:**	10:15
FCR Start Time:	6:55	**FCR Stop Time:**	17:20	**Tot Hrs mns:**	10:25

Use military time format *00:00*

WEATHER CONDITIONS: Sunny - 60 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. No exclusion zone is currently in operation. Newman continues to import and place ABC material for backfill in the control building excavation. 95% compaction achieved on first lift around 10:30. Second lift if underway. CVE is tying rebar for the spread footer mats and mobing materials for forming up the footers and walls for the control building. Contractors: CVE = 4 , Newman = 3 , R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Ken Barto 0655
Dispatcher logout, name and time:	Barry Nielson 1730

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Thursday, October 13, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	7:00	**Crew Stop Time:**	19:20	**Tot Hrs mns:**	12:20
FCR Start Time:	6:50	**FCR Stop Time:**	19:25	**Tot Hrs mns:**	12:35

Use military time format *00:00*

WEATHER CONDITIONS: Sunny - 60 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. Currently there is not an active exclusion zone. The current plan is for CVE to work on Saturday in an effort to insure that they will make their final pour on the control building by 10/29. Received OK to utilize CDF for backfilling of the interior of the control building, once a specification has been submitted and approved by RMP. Also advised by Brent Wiggins to take precautions in placing CDF so walls aren't damaged during placement. Clearance on the west side of the control building requires that we not pour the pull box when we pour the rest of the building. Brent has requested that we insure that an appropriate bonding agent is utilized at the cold joint and that if we don't install the rebar per the drawing that we watch our lap splices. We intend to install per the drawings. CVE is making up forms and tying rebar. Newman is continuing to place ABC in the building excavation and we are staying late to make sure that CVE can start setting forms on Friday morning. Worked until 7:30 and couldn't get the south end of the backfill to pass. We think it will pass this morning and CVE will be able to get started with their forms and rebar. Contractors: CVE = 4 , Newman = 4 , R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Gus Montanez 0655
Dispatcher logout, name and time:	Jim Bowman 2030

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Friday, October 14, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	7:00	**Crew Stop Time:**	17:50	**Tot Hrs mns:**	10:50
FCR Start Time:	6:45	**FCR Stop Time:**	18:00	**Tot Hrs mns:**	11:15

Use military time format *00:00*

WEATHER CONDITIONS: Sunny - 75 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. Currently there is not an active exclusion zone. Passed final compaction test on the control building excavation 8:15. CVE crew moved in to start placing forms. Newman is excavating a hole in the vicinity of the east end of the switchgear foundation to detennine if we are going to be in the fill material or the native material with our excavation. If we remain in the existing fill material, Wilding will perform a soil bearing test to see if the existing fill material meets the requirements without Newman needing to over-ex an additional one foot of material. CVE was able to get the footings formed and rebar tied today and they poured 12 cy of concrete, starting at 16:45 and completing the pour and cleanup at 17:50. It should be noted that both CVE and Newman crews are doing an excellent job of keeping the site clean and orderly. Contractors: CVE = 4 , Newman = 3 , R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Manny LuHaun 0650
Dispatcher logout, name and time:	Jim Bowman 1800

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild **DATE :** Saturday, October 15, 2011

PO & Work Order NO. : 3000078050 / 10035803 **MAIN CONTRACTOR :** Cache Valley Electric

Crew Start Time:	7:00	**Crew Stop Time:**	14:45	**Tot Hrs mns:**	7:45
FCR Start Time:	6:45	**FCR Stop Time:**	15:00	**Tot Hrs mns:**	8:15

Use military time format *00:00*

WEATHER CONDITIONS: Sunny - 75 degrees

DESCRIPTION: (work performed, general comments, Instructions to contractor, # of crew members onsite.)

R&R set up four monitors. Currently there is not an active exclusion zone. CVE stripped footer forms and began forming up the building walls and the walls for the pull boxes and vaults. They got the interior wall approximately 60% complete and anticipate pouring the walls on Wednesday, 10/19. Contractors: CVE =3 , R&R = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time:	Kelly Astill 0650
Dispatcher logout, name and time:	???????? 1500 (Sorry, new name and can't remember)

DISCREPANCIES:	**IMMEDIATE CORRECTIVE ACTION TAKEN:**

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:	**Reported by:**	**Time:**

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Russ Johnson
Field Construction Representative

REI LAB Reservoirs Environmental, Inc.

October 18, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 222621-1
Project # / P.O. #	None Given
Project Description:	Rocky Mtn. Power 3rd West Sub Station

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 222621-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 222621-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: Rocky Mtn. Power 3rd West Sub Station
Date Samples Received: October 17, 2011
Analysis Type: TEM, AHERA
Turnaround: 24 Hour
Date Samples Analyzed: October 18, 2011

Client ID Number	Lab ID Number		Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-101411-S	EM	811490	0.1100	754	ND	0.0046	BAS	BAS
3W-101411-N	EM	811491	0.1100	750	ND	0.0047	BAS	BAS
3W-101411-W	EM	811492	0.1100	761	ND	0.0046	BAS	BAS
3W-101411-E	EM	811493	NA	0	NA	----	----	----

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Veltraino
Date: 2011.10.18 13:01:08 -06'00'

DATA QA

Due Date: 10-18
Due Time: 955

Reservoirs Environmental, Inc.

RES 222621

8901 Logan St. Denver, CO 80216 • Ph: 303 964-1888 • Fax 303-477-4275 • Toll Free :866 RESI-ENV
Pager : 303-609-2098

INVOICE TO: (IF DIFFERENT) | **CONTACT INFORMATION:**

Company: R & R Environmental	Company:	Contact: Dave Roskelley	Contact: Justin Kargis
Address: 47 W. 9000 S Sandy, Ut. 84070	Address:	Phone:	Phone:
		Fax:	Fax:
		Cell/pager: 801 541-1035	Cell/pager: 801 828-5219
Project Number and/or P.O. #:		Final Data Deliverable Email Address:	
Project Description/Location: Rocky Mtn Power 3rd West Sub Station		dave@rrenviro.com	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm

PLM / PCM / (TEM) ___ RUSH (Same Day) X PRIORITY (Next Day) ___ STANDARD
(Rush PCM = 4hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm

Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-5 Day
RCRA 8 / Metals & WetMthg / Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 8 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm

E.coli O157:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, e.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 5 Day ___ 6 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s) RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	MICROBIOLOGY: E.coli O157:H7: +/-	MICROBIOLOGY: Listeria: +/-	MICROBIOLOGY: Aerobic Plate Count: +/- or Quantification	MICROBIOLOGY: E.coli: +/- or Quantification	MICROBIOLOGY: Coliforms: +/- or Quantification	MICROBIOLOGY: S.aureus: +/- or Quantification	MICROBIOLOGY: Y & M: +/- or Quantification	MICROBIOLOGY: Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1 [redacted] 3W-101411-S		X															754	A		10/14/11		811490
2 3W-101411-N		↓															750	↓		↓		91
3 3W-101411-W		↓															761	↓		↓		92
4 3W-101411-E (Blank)		↓															NA	↓				93
5																						
6																						
7																						
8																						
9																						
10																						

VALID MATRIX CODES

Air = A	Bulk = S
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

LAB NOTES:

Number of samples received: 4 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyse incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: Justin Kargis - FedEx Date/Time: 10/14/11

Laboratory Use Only
Received By: Kathy Date/Time: 10.17.11 955 Carrier FedEx

Sample Condition: On Ice Yes / No | Sealed Yes / No | Intact Yes / No
Temp. (F°) _____

Results:														
Contact Dave	Phone Email Fax	Date 10/14/11	Time 9:45a	Initials JK	Contact	Phone Email Fax	Date	Time	Initials
Contact	Phone Email Fax	Date	Time	Initials	Contact	Phone Email Fax	Date	Time	Initials

TRK# 7952 9446 7200

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

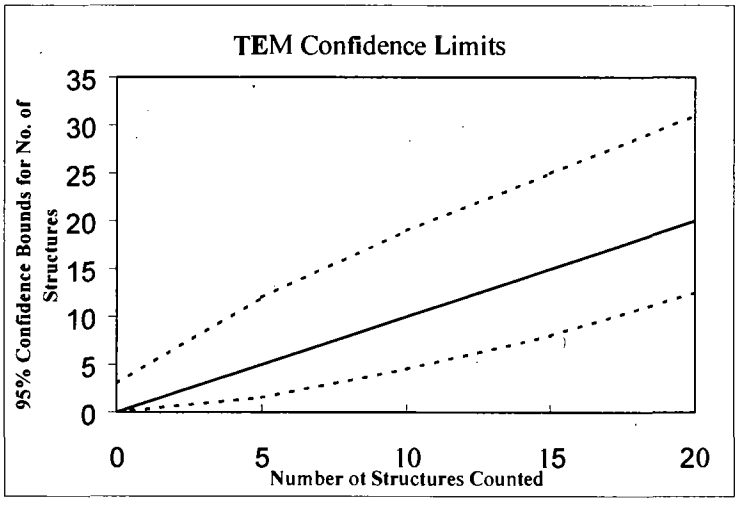
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
Angela Heitger
Jonathan Bernard
Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REt
Instmment	JEOL 100 (N) S
Voltaae (KV)	100 KV
Magnification	(20K) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Araa (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	754
Date received by lab	10/17/11
Lab Job Number:	222621
Lab Sample Number:	811490

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/18/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-4	ND												
	G4-4	ND												
	F4-4	ND			Preps A & B			95% matrix			3-5% debris			
	G5-4	ND												
	F5-4	ND												
B	K4-4	ND												
	H4-4	ND												
	G4-4	ND												
	F4-4	ND												
	E4-4	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Leboratory name:	REI
Instrument	JEOL 100(N) S
Voltage (KV)	100 KV
Magnification	(20)(K)10KX
Grid opening area (mm2)	0.011
Scale: IL =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	RaR
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	750
Date received by lab	10/17/11
Lab Job Number:	222621
Lab Sample Number:	811491

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/18/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-4	ND												
	G4-4	ND												
	F4-4	ND					Prep A	90% int			5% debris			
	E4-4	ND					Prep B ~ A							
	C4-4	ND						10/10/11						
	B4-4	ND												
B	H4-6	ND												
	G4-6	ND												
	F4-6	ND												
	E4-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100(2) S
Voltage (KV)	100 KV
Magnification	(20)10K/10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	365
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cin2)	761
Date received by lab	10/17/11
Lab Job Number:	222621
Lab Sample Number:	811492

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/18/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	G4-6	ND												
	F4-6	ND												
	E4-6	ND						Prep A 80% on Grid		5% debris				
	C4-6	ND						Prep B 90% on Grid		5% debris				
	B4-6	ND												
B	H3-3	ND						[signature]	10/18/11					
	G3-3	ND												
	F3-3	ND												
	E4-4	ND												
	C4-4	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole Q = Chrysotile NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50^{th} structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, } mm^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area } (mm^2)}{\text{Average GO area } (mm^2)} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm2} = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed } (mm^2)}$$

GO = TEM grid opening

REI LAB Reservoirs Environmental, Inc.

October 12, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 222298-1
Project # / P.O. #	None Given
Project Description:	3rd West Sub Station - RMP

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 222298-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

P: 303-964-1986
F: 303-477-4275

5801 Logan Street, Suite 100 Denver, CO 80216

1-866-RESI-ENV
www.reilab.com

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 222298-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: 3rd West Sub Station - RMP
Date Samples Received: October 11, 2011
Analysis Type: TEM, AHERA
Turnaround: 24 Hour
Date Samples Analyzed: October 12, 2011

Client ID Number	Lab ID Number	Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-101011-E	EM 808578	0.0990	876	ND	0.0044	BAS	BAS
3W-101011-S	EM 808579	0.0990	875	ND	0.0044	BAS	BAS
3W-101011-N	EM 808580	0.0990	874	ND	0.0044	BAS	BAS
3W-101011-W	EM 808581	0.0990	874	ND	0.0044	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Vetrano
Date: 2011.10.12 12:26:55 -06'00'

DATA QA

Due Date: 10·12·11
Due Time: 1020a

REI LAB Reservoirs Environmental, Inc.

RES 222298

6601 Logan St. Denver, CO 80216 • Ph: 303 964-1666 • Fax 303-477-4275 • Toll Free :866 RESI-ENV
Pager : 303-509-2098

INVOICE TO: (IF DIFFERENT)		CONTACT INFORMATION:	
Company: R&R Environmental	Company:	Contact: Dave Roskelley	Contact:
Address: 4710 9000 S Sandy, Ut. 84070	Address:	Phone:	Phone:
		Fax:	Fax:
		Cell/pager: 801 541-1035	Cell/pager
Project Number and/or P.O. #:		Final Data Deliverable Email Address:	
Project Description/Location: 3rd West Sub Station – RMP			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm

PLM / PCH / TEM ___ RUSH (Same Day) X PRIORITY (Next Day) ___ STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 8pm

Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-5 Day
RCRA 8 / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 5 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm

E.coli O157:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-6 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for after hours, weekends and holidays.

Special Instructions:

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	MICROBIOLOGY: E.coli O157:H7: +/-	MICROBIOLOGY: Listeria: +/-	MICROBIOLOGY: Aerobic Plate Count: +/- or Quantification	MICROBIOLOGY: E.coli: +/- or Quantification	MICROBIOLOGY: Coliforms: +/- or Quantification	MICROBIOLOGY: S.aureus: +/- or Quantification	MICROBIOLOGY: Y & M: +/- or Quantification	MICROBIOLOGY: Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)	LAB NOTES:
1	3W-101011-E		X																876	A		10/10/11		808578	
2	3W-101011-S		↓																875	↓		↓		79	
3	3W-101011-N																		874					80	
4	3W-101011-W																		874					81	
5																									
6																									
7																									
8																									
9																									
10																									

Number of samples received: 4 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: [signature] Date/Time: 10/10/11

Laboratory Use Only
Received By: [signature] Date/Time: 10·11·11 0830 Carrier FedEx

Sample Condition: On Ice Yes / No; Sealed Yes / No; Intact (Yes) / No
Temp. (F°) _____

Results:	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials
	Dave	(Phone)	Email	Fax	10/12/11	11:30a	[initials]		Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

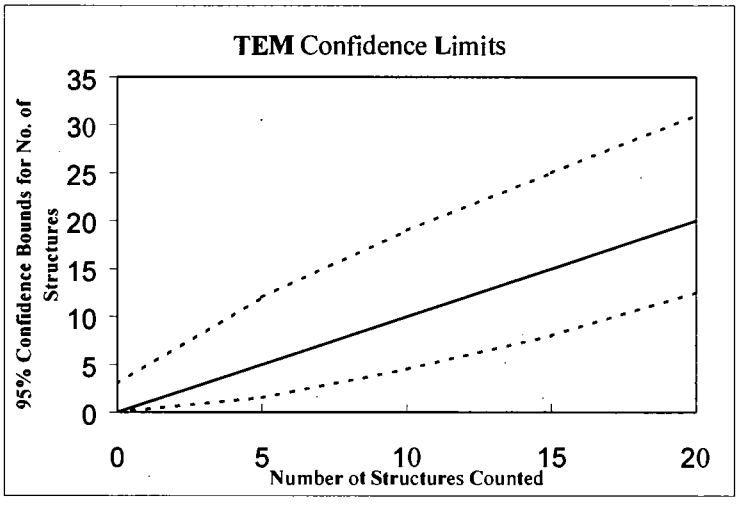
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr	Paul D. LoScalzo
Nathan DelHierro	Mark Steiner
Angela Heitger	Norberto Zimbleman
Jonathan Bemard	Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 10 =	0.055 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	876
Date received by lab	10/11/11
Lab Job Number:	222298
Lab Sample Number:	808578

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/12/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	H6-4	ND												
	G6-4	ND												
	F6-4	ND					Prep A	80% intact		5% debris				
	E6-4	ND					Prep B	90% intact		5% debris				
	C6-4	ND												
B	F4-4	ND												
	E4-4	ND												
	C4-4	ND												
	B4-4	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile QA-BW NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	20KX/10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	875
Date received by lab	10/11/11
Lab Job Number:	222298
Lab Sample Number:	808579

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/12/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F3-4	ND												
	E3-4	ND												
	C3-4	ND			Pmp	A	80% intact			3-5% debris				
	B3-4	ND			Pmp	B	70% intact			3-5% debris				
	A3-4	ND												
B	H2-3	ND												
	G2-3	ND												
	F2-3	ND												
	E2-3	ND												

10/12/11

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby (ype) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instmment	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	20KX/10KX
Grid opening area (mm2)	0.011
Scate: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	386
Secondary Filter Araa (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Afr, O=Dust):	A
Air volume (L) or dust area (cm2)	874
Date received by lab	10/11/11
Lab Job Number:	222298
Lab Sample Number:	808580

F-Factor Calculation (Indirect Preps Only):

Fraction of pdmary filter used	
Total Resusperision Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/12/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting mles (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alianment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Mentification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K4-1	ND												
	H4-1	ND				Pmp	A	90%		3-5%	debris			
	G4-1	ND				Pmp	B	80%		3-5%	debris			
	F4-1	ND												
	E4-1	ND												
B	G4-6	ND												
	F4-6	ND												
	E4-6	ND												
	C4-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	874
Date received by lab	10/11/11
Lab Job Number:	222298
Lab Sample Number:	808581

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/12/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules 0SO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Stmctures		Dimensions		Idemification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F4-4	ND												
	E4-4	ND												
	C4-4	ND					Pump A	80% he content			3-5% he debris			
	B4-4	ND					Pump B	90% he content			3-5 % he debris			
	C3-1	ND												
B	F4-6	ND									10/12/11			
	E4-6	ND												
	C4-6	ND												
	B4-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole D = Chrysotile NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening

REI LAB Reservoirs Environmental, Inc.

October 13, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 222360-1
Project # / P.O. #	None Given
Project Description:	Rocky Mtn. Power 3rd West Sub Station

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Gustomer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 222360-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 222360-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: Rocky Mtn. Power 3rd West Sub Station
Date Samples Received: October 12, 2011
Analysis Type: TEM, AHERA
Turnaround: 24 Hour
Date Samples Analyzed: October 13, 2011

Client ID Number	Lab ID Number		Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-101111-E	EM	809108	0.0770	1106	ND	0.0045	BAS	BAS
3W-101111-S	EM	809109	0.0770	1106	ND	0.0045	BAS	BAS
3W-101111-N	EM	809110	0.0770	1106	ND	0.0045	BAS	BAS
3W-101111-W	EM	809111	0.0770	1106	ND	0.0045	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Vettraino
Date: 2011.10.13 12:18:44 -06'00'

DATA QA

Due Date: 10·13
Due Time: _____

RES 222360

Reservoirs Environmental, Inc.

5601 Logan St. Denver, CO 80216 • Ph: 303 964-1966 • Fax 303-477-4275 • Toll Free :866 RESI-ENV
Pager : 303-609-2098

INVOICE TO: (IF DIFFERENT)		CONTACT INFORMATION:	
Company: R & R ENVIRONMENTAL	Company:	Contact: DAVE ROSECRANS	Contact: CRAIG FORD
Address: 4764 9000 So SANDY UT 84070	Address:	Phone:	Phone:
		Fax:	Fax:
		Cell/pager: 801-541-1035	Cell/pager: 801-673-7488
Project Number and/or P.O. #:		Final Data Deliverable Email Address:	
Project Description/Location: ROCKY MTN POWER 3rd WEST SUB STATION			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm

PLM / PCM / (TEM) ___ RUSH (Same Day) X PRIORITY (Next Day) ___ STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm

Metal(s) / Digst ___ RUSH ___ 24 hr. ___ 3-6 Day
RCRA 8 / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 6 Day
Prior notification is required for RUSH turnarounds.

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E.coli O157:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 5 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for after hours, weekends and holidays.

Special Instructions:

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Air = A	Bulk = B
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s) RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOOY: Salmonella: +/-	MICROBIOLOOY: E.coli O157:H7: +/-	MICROBIOLOOY: Listeria: +/-	MICROBIOLOOY: Aerobic Plate Count: +/- or Quantification	MICROBIOLOOY: E.coli: +/- or Quantification	MICROBIOLOOY: Coliforms: +/- or Quantification	MICROBIOLOOY: S.aureus: +/- or Quantification	MICROBIOLOOY: Y & M: +/- or Quantification	MICROBIOLOOY: Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh:mm a/p	EM Number (Laboratory Use Only)
1 3W - 101111 - E																	1106				809108
2 3W - 101111 - S																	1106				9
3 3W - 101111 - N																	1106				10
4 3W - 101111 - W																	1106				11
5																					
6																					
7																					
8																					
9																					
10																					

Number of samples received: 4 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy or original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.8% monthly interest charge.

Relinquished By: [signature] FEDEX Date/Time:

Laboratory Use Only
Received By: Kelly Date/Time: 10·12·11 855 Carrier Fedex

Sample Condition: On Ice Yes / No Sealed Yes / No Intact (Yes) No
Temp. (F°) _____

Results:	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials

TRK# 8697 8473 2170

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
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C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

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M = other structure associated with a matrix
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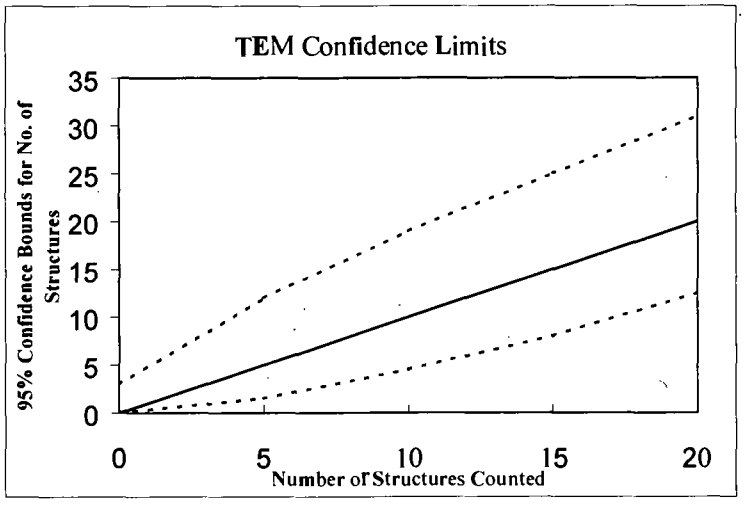
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr	Paul D. LoScalzo
Nathan DelHierro	Mark Steiner
Angela Heitger	Norberto Zimbleman
Jonathan Bernard	Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1106
Date received by lab	10/12/11
Lab Job Number:	222360
Lab Sample Number:	807108

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/13/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AHT
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-1	ND												
	F4-1	ND					Prep A	90% in tmt		3-7% debris				
	E4-1	ND					Prep B	90% in tmt		3-7% debris				
	C4-1	ND												
B	G4-1	ND						JB 10/13/11						
	F4-1	ND												
	E4-1	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile QA RGH NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (CX) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1106
Date received by lab	10/12/11
Lab Job Number:	222360
Lab Sample Number:	801109

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis data	10/13/11
Method (D=Direct, I=Indirect, IA=IndirecL ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage Ideation	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K3-6	ND												
	I3-6	ND												
	G3-6	ND					Prep A	90% on tape		5% debris				
	F3-6	ND					Prep B	~1						
B	H2-6	ND							10/13/11					
	G2-6	ND												
	F2-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1106
Date received by lab	10/12/11
Lab Job Number:	222360
Lab Samole Number:	8071.10

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/13/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G3-6	ND												
	F3-6	ND					Pop A	80% in bkgd			5-7% debris			
	E3-6	ND					Pop B	60% in bkgd			5-7%			
	C3-6	ND												
B	F2-1	ND												
	E2-4	ND												
	E2-1	ND												

10/13/11

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instmment	JEOL 100 (X) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter araa (mm2)	385
Secondary Filter Area (mm2)	
QA Tyoe	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1100
Data received by lab	10/12/11
Lab Job Number:	222360
Lab Sample Number	80711

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter uaed	
Total Resuapenskm Volume (ml)	
Volume Applied to secondary filter (ml)	

Arialyzed by	JB
Analysis date	10/13/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-6	ND												
	G4-6	ND					Pmp A	80% in hunt			5-7% debris			
	F4-6	ND					Pmp B	60 % in hunt			5-7 % debris			
	F5-6	ND												
B	H4-6	ND												
	G4-6	ND												
	F4-6	ND												

10/13/11

Rsv 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50^{th} structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, } mm^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area } (mm^2)}{\text{Average GO area } (mm^2)} \times \frac{1L}{1000cc}$$

$$\text{Filter loading, s/mm2} = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed } (mm^2)}$$

GO = TEM grid opening

REI LAB Reservoirs Environmental, Inc.

October 17, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 222518-1
Project # / P.O. #	None Given
Project Description:	Rocky Mtn. Power 3rd West Sub Station

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 222518-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:	RES 222518-1
Client:	R & R Environmental
Client Project Number / P.O.:	None Given
Client Project Description:	Rocky Mtn. Power 3rd West Sub Station
Date Samples Received:	October 14, 2011
Analysis Type:	TEM, AHERA
Turnaround:	24 Hour
Date Samples Analyzed:	October 14, 2011

Client ID Number	Lab ID Number	Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-101311-S	EM 810490	0.1100	947	ND	0.0037	BAS	BAS
3W-101311-E	EM 810491	0.1100	946	ND	0.0037	BAS	BAS
3W-101311-N	EM 810492	0.1100	947	ND	0.0037	BAS	BAS
3W-101311-W	EM 810493	0.1100	947	ND	0.0037	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Vettraino
Date: 2011.10.17 09:21:22 -06'00'

DATA QA

Due Date: 10·17
Due Time: 8:40

RES 222518

RELAB Reservoirs Environmental, Inc.

6601 Logan St. Denver, CO 80216 • Ph: 303 984-1966 • Fax 303-477-4276 • Toll Free :866 RESI-ENV
Pager : 800-608-2068

Page: _____

INVOICE TO: (IF DIFFERENT) | **CONTACT INFORMATION:**

Company: R & R Environmental	Company:	Contact: Dave Roskelley	Contact: Justin Kaggis
Address: 47 W. 9000S Sandy, Ut · 84070	Address:	Phone:	Phone:
		Fax:	Fax:
		Cell/pager: 801 541-1035	Cell/pager: 801 828-5219
Project Number and/or P.O. #:		Find Data Deliverable Email Address:	
Project Description/Location: Rocky Mtn Power 3rd West Sub Station		dave@rrenviro.com	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm

PLM / PCM / (TEM) ___ RUSH (Same Day) X PRIORITY (Next Day) ___ STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 9pm

Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-6 Day
RCRA S / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 5 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm

E.coli O157:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s) RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1 3W-101311-S		X															947	A		10/13/11		810490
2 3W-101311-E		↓															946	↓				91
3 3W-101311-N																	947					92
4 3W-101311-W																	947					93
5																						
6																						
7																						
8																						
9																						
10																						

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

LAB NOTES:

Number of samples received: 4 (Additional samples shall be listed on attached long form.)

NOTE: SS will analyse incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: Justin Kaggis - FedEx Date/Time: 10/13/11

Laboratory Use Only
Received By: Kadlly Date/Time: 10·14·11 840 Carrier: FedEx

Sample Condition: On Ice Yes / No Sealed Yes / No (Intact) Yes / No
Temp. (F°) _____

Results:	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials

TRK# 7952 9464 9635

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

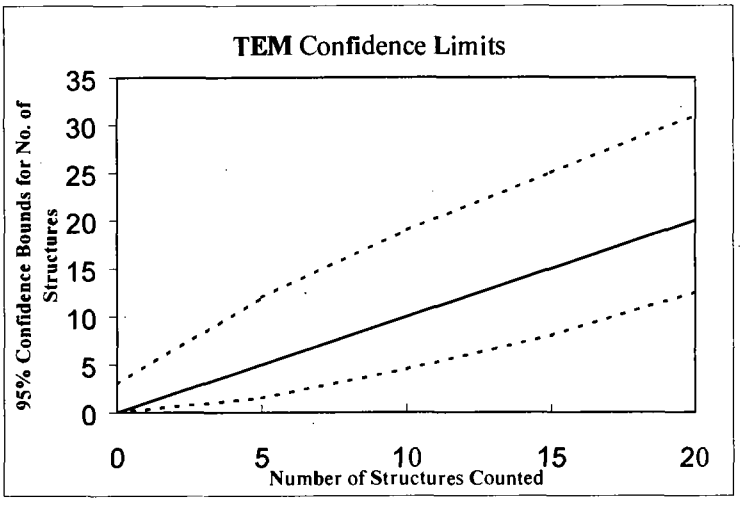
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr	Paul D. LoScalzo
Nathan DelHierro	Mark Steiner
Angela Heitger	Norberto Zimbleman
Jonathan Bemard	Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	Reservoirs Environmental, Inc.
instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 10 =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not OA

Client:	R & R Environmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	947
Date received by lab	10/14/2011
Lab Job Number:	222518
Lab Sample Number:	810490

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	n.zimbetman
Analysis date	10/14/2011
Method (D=Direct, I=Indirect, IA=Indirect ashed)	0
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Client Sample ID Number SW-1013n-6

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	E2-6	ND												
	F2-3	ND												
	F3-1	ND												
	E3-4	ND												
	E3-1	ND												
	C3-1	ND			A-	60	1 struct. 3-5 fibers							
B	B3-4	ND												
	C4-1	ND												
	E4-4	ND												
	F4-1	ND			B	~	A							

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

NB2

Reservoirs Environmental, inc.
TEM Asbestos Structure Count

Laboratory name:	[illegible]
Instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not QA

Client:	R & R Environmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	946
Date received by lab	10/14/2011
Lab Job Number:	222518
Lab Sample Number:	81D491

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, I=Indirect, IA=Indirect; ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahern
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Client Sample ID Number: SW-101311-E

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	B3-1	ND												
	B3-4	ND												
	B3-3	ND												
	A3-6	ND												
	B4-1	ND					A: 85 struct.		1-3	x	(BMN)			
	A4-1	ND												
B	B5-1	ND												
	C4-4	ND												
	B4-9	ND												
	C3-6	ND					2 ~	A						

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	[illegible]
Instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.0SS um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not OA

Client:	K & K Environmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	947
Date received by lab	10/14/2011
Lab Job Number:	222518
Lab Sample Number:	810492

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Client Sample ID Number SW-101311-N

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	L5-1	ND												
	K5-6	ND												
	K5-1	ND												
	G5-1	ND					Pref. A:	70% tot.	5-10% (trace)					
B	H4-1	ND												
	G4-6	ND												
	H3-3	ND												
	G3-6	ND												
	G3-3	ND												
	F3-6	ND					Pref. B ~ A							

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

-JBX

Reservoirs Environmental, Inc.
***TEM* Asbestos Structure Count**

Laboratory name:	[illegible]
Instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not QA

Client,	R & R Environmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	947
Date received by lab	10/14/2011
Lab Job Number	222518
Lab Sample Number:	810493

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, i=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Client Sample ID Number: 3W-101311-W

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	E4-6	ND												
	E4-3	ND												
	E4-4	ND												
	E4-4	ND												
	E3-3	ND				A:	60 [illegible]							
	E3-6	ND												
B	F3-1	ND												
	F2-3	ND												
	F2-4	ND												
	G2-1	ND				B:	~ A							

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

[illegible]

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening

Due Date: 10-17
Due Time: 840

RES 222520

REI LAB Reservoirs Environmental, Inc.

6601 Logan St. Denver, CO 80216 • Ph: 303 964-1999 • Fax 303-477-4278 • Toll Free :866 RESI-ENV
Pager : 303-508-2088

INVOICE TO: (IF DIFFERENT)		CONTACT INFORMATION:	
Company: R & R Environmental	Company:	Contact: Dave Roskelley	Contact: Justin Kaye
Address: 47 W. 9000S Sandy, Ut. 84070	Address:	Phone:	Phone:
		Fax:	Fax:
		Cell/pager: 801 541-1035	Cell/pager: 801 828-5219
Project Number and/or P.O. #:		Final Data Deliverable Email Address:	
Project Description/Location: Rocky Mtn Power 3rd West Sub Station			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm
PLM / PCM (TEM) ___ RUSH (Same Day) X PRIORITY (Next Day) ___ STANDARD
(Rush PCM = 2hr, TEM = 8hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 8pm
Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-5 Day
RCRA 8 / Metals @ WaMing Fume Scan / TCLP ___ RUSH ___ 8 day ___ 10 day
Organics ___ 24 hr ___ 3 day ___ 5 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 8pm
E.coli O15T:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
MoM ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant. Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s) RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	LAB NOTES: EM Number (Laboratory Use Only)
1	3W-101211-E																1050			10-12-11		810494
2	3W-101211-S																1062			"		95
3	3W-101211-N																1042			"		96
4	3W-101211-W																1054			"		97
5																						
6																						
7																						
8																						
9																						
10																						

Number of samples received: _____ (Additional samples shall be listed on attached long form.)

NOTE REI will analyze hearing samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: Justin Kaye - FedEx Date/Time: 10-12-11

Laboratory Use Only
Received By: Kaley Date/Time: 10-14-11 840 Carrier: FedEx

Sample Condition: On Ice Yes / No Sealed Yes / No Intact (Yes) / No
Temp. (°c) _____

Results:	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials

TRK# 8697 8473 2160

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

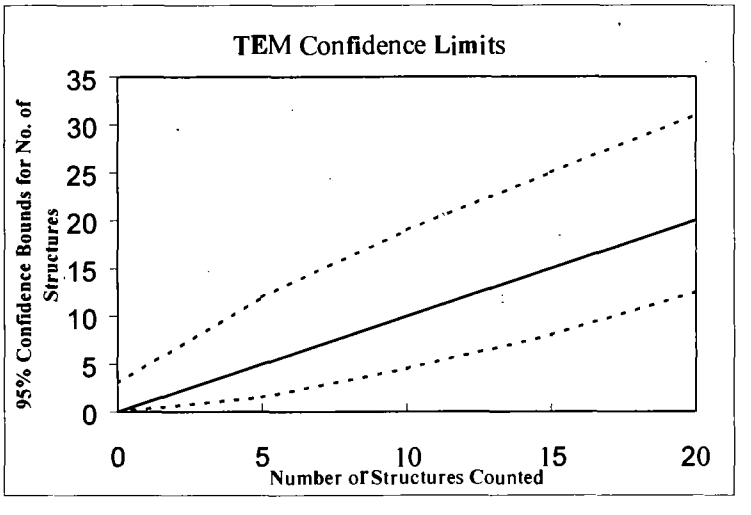
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
Angela Heitger
Jonathan Bemard
Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds fbr the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	[illegible]
Instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
GrM opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 10 =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not QA

Client:	R & R Evironmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1050
Date received by lab	10/14/2011
Lab Job Number:	222520
Lab Sample Number:	810494

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
GrM storage location	Month Analyzed
Scope Alignment	Date Analyzed

Client Sample ID Number 3W-101211-E

Grid	GrM Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G1-3	ND												
	F1-6	ND												
	F2-6	ND												
	G2-1	ND												
	G2-3	ND												
	G3-1	ND												
	G3-3	ND			A	~	GOOD START		≤	2 (Brown)				
B	H4-1	ND												
	H4-6	ND												
	H5-1	ND			B	~	A							

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	Reservoirs Environmental Inc.
Instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not QA

Client:	R & R Evironmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1062
Date received by lab	10/14/2011
Lab Job Number:	222520
Lab Sample Number:	810495

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Client Sample ID Number 3W-101211-S

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-6	ND												
	K4-3	ND												
	K4-6	ND												
	K5-1	ND												
	H5-1	ND					A: ~60 structures, 1-3 bundles							
B	G5-6	ND												
	G5-3	ND												
	F5-1	ND												
	E5-1	ND												
	E5-6	ND					B ~ A							

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Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	[illegible]
Instrument	JEOL 100 CX N
Voltage (KV)	100 KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not QA

Client:	R & R Environmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1042
Date received by lab	10/14/2011
Lab Job Number:	222520
Lab Sample Number:	610496

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, I=IndirecL IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Client Sample ID Number SW-10121t-N

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	E4-6	ND												
	E3-3	ND												
	E3-6	ND												
	F3-3	ND												
	F3-6	ND												
	G3-3	ND				A:	~50 [illegible]	[illegible] 3-5 [illegible]						
B	G4-1	ND												
	F4-1	ND												
	E4-4	ND												
	E4-6	ND				B	~ A							

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ND [illegible]

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	[illegible]
Instrument	JEOL 100 CX N
Voltage (KV)	teo KV
Magnification	20X
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	Not QA

Client:	R&R Environmental
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1054
Date received by lab	10/14/2011
Lab Job Number:	222520
Lab Sample Number:	810497

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	n.zimbelman
Analysis date	10/14/2011
Method (D=Direct, I=Indirect, IA=IndirecL ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment`	Date Analyzed

Client Sample ID Number 3W-101211-W

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F5-3	ND												
	F5-3	ND												
	EG-4	ND												
	EG-4	ND												
	EG-1	ND					A: 55 structures 3-5 structures							
B	E4-4	ND												
	E4-1	ND												
	E3-3	ND												
	F3-1	ND												
	G3-1	ND					B:	49 structures	3-5	structures				

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Analytical Procedures – AHERA

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$$\text{Filter loading, s/mm2} = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed } (mm^2)}$$

GO = TEM grid opening

File: Shared on server T/Offforms.sg/AHERA Procedures
Revised: 02/27/02